

OUR ANTIDOTE AGAINST THE FATE OF OTHER NATIONS.

Where now in the scale of nations is that land to which we owe our Geometry, and Algebra, and Arithmetic? Hindoos and Arabs bequeathed these triumphs of genius to us, and yet they are fallen as a people, they are degraded as nations. What is now the social and political position of Greece and Rome; nations which once dictated to the world, and are so associated in the students' mind with the arts of war and peace, that it is difficult to believe in their present poverty of mind and imagination—

"Eternal summer gilds them yet,
But all except their sun has set."

But why mention other examples of civilization corrupted, knowledge perverted and glories departed? The splendour of the Italian Republics is gone. Nothing remains in memory of the departed glory of the empires of the past save their venerable ruins and incomparable public works, which even now bewilder by their vastness. And does analogy (it is the point which concerns us more immediately) justify us in dreading a like decay of Anglo-Saxon knowledge and power? No! There are certain safeguards, if we but employ them, which render the destruction of our civilization improbable, nay impossible. The bulwarks against that worst of barbarisms, corrupted civilization, are the diffusion of useful knowledge and our Christianity.

NOTHING NEW UNDER THE SUN—SECURITY AGAINST THE LOSS OF OUR DISCOVERIES.

It is almost certain that there is scarcely an invention in Art or Science of modern times which was not known in theory to some of the Philoſophic ancients. Among recent discoveries we may single out the Stereoscope as an illustration of an invention singularly beautiful and creditable to the eye, and yet the principle of the instrument was known 1,500 years ago. But with the inventor perished the invention. The manuscript that contained the treasure was neither understood nor valued, and thus acquisitions to human knowledge were lost. In the present day, the diffusion of every Scientific and Literary achievement, through the aid of printing, renders such a disaster almost impossible, and thus perpetuity is guaranteed to our discoveries. Hence it is that we should hail with joy the advent of every means by which learning is disseminated and the masses enlightened. Hence it is that we should rejoice in the attainment of every new motive to literary and scientific distinction. Therefore it is that the true philanthropist hears with satisfaction of every new school of science, and of every additional university, of every well regulated mechanics' institute. He knows full well that knowledge imparted does not diminish the store of the teacher, and he sees in every new improvement in the education of a people the surest means of retaining to the human family the blessings of past experience.

CHRISTIANITY THE GREAT CONSERVATOR OF KNOWLEDGE AND VIRTUE.

I have spoken of one of the securities possessed by the present age against the sudden decay of our knowledge. Let me now allude to another, to one which can save our literature from corruption and consequent decay, which can foster and promote science while it preserves it from perversion, which can direct our research to what is good and divert it from what is evil, a bulwark against the abuse of learning and the aversion to it which is sure to follow—I mean the Christian religion. In the present age, we have no reason to dread that our arts and sciences will ever degenerate into superstitious or senseless theorizing. Astronomy in our hands will never again become Astrology. We may safely affirm that Chemistry will never more resolve itself into Alchemy and Magic, but we have other more substantial dangers; we may dread lest our Philosophy may outstrip our virtue. We should scorn the fallacy that there is no difference between denouncing the evil of knowledge and the knowledge of evil: it is the latter only that the Christian Philosopher may deprecate; he knows that it is not unusual to transform blessings into curses, or to use the instruments of our civilization as weapons against ourselves. The same railway which, by facilitating the intercommunion of nations, promotes knowledge and obliterates prejudices may, and often does, become an engine of widespread disaster. The same Press which can delight the reader with details of what otherwise he might never have heard, which can carry him in imagination into the universal world, which can please while it instructs, and prove a friend to the solitary and a guide to all; that same engine for incalculable good may poison the mind with pestilential productions; it may, and does cater to the diseased appetite of a corrupt nature; it may disseminate falsehood as well as truth; it may print the Bible to-day; it may pollute the innocent mind to-morrow. Alcohol, so necessary to many arts—who can recount the horrors of its abuse? Unless the corrective influence of Christianity accompany the prodigious force of modern invention; unless the spirit of benevolence (and who can possess it so disinterestedly as the Christian) keeps pace with our mechanical progress, unmitigated evil may

result; and the reason is obvious, for knowledge is evil when undirected by benevolence; knowledge, to prove beneficial, must progress beneath the sheltering wings of Christianity, and then we need not dread that abuse of the gifts of Providence which has ever led to woful re-action.

FINITE LIMIT OF HUMAN INVESTIGATION.

The philosopher alone can understand the littleness of his own attainments; the magnitude of every fresh discovery fills his heart with wonder and humility, from a consciousness that he is but treading the threshold of the temple of science while his intellect is overpowered by the bare conjecture of the majesty of what may remain in reserve for future discovery within the penetralia. This was the feeling which filled the mind of Newton, who could compare the extent of his noble investigation of natural laws to the work of a child gathering pebbles on the shore. Strange as it may sound, the simplest facts in nature are still bewildering mysteries. Phenomena, which from familiarity we deem intelligible, when regarded philosophically, fill us with astonishment. It would seem as if Providence had permitted the human mind to triumph most in those subjects which lie remotest from itself, lest man becoming as well known to himself as other works of creation, should say in his heart, There is no God. How else does it happen that, while subjects relating to life and happiness are comparatively unknown, men whose names we reverence are permitted to pierce through the vault of Heaven and make such discoveries of other worlds and systems as keep the mind in suspense whether it is more delighted with the increasing precision of man's demonstrations or overwhelmed with the majestic vastness of the universe. We naturally wonder and admire when we hear that Leverier, by the aid of purely mathematical reasoning, could with certainty affirm that a planet as yet unseen, would be discovered in an assigned region of the heavens. The telescope is eagerly directed to the prescribed spot and the planet is detected. What a perfection of science is revealed in the fact that Murchison was able to announce that in Australia veins of gold must exist, though as yet not a particle had been discovered. By the aid of science we can predict with the certainty of personal knowledge, that when ages on ages have rolled by the glorious Southern Cross will again be visible on these Northern latitudes. But why dwell on such intellectual grandeur? Man turns from such contemplation to self, and he shrinks again into conscious humility. His success in the investigation of nature might intoxicate, if his failure in the knowledge of self did not recall him to sobriety. Yes! the field in which the mind can work is as infinite as the mind itself. Any moment may introduce us to some new discovery which may throw all former triumphs into the shade. On every side is the material open to experiment and observation, inviting every lover of nature to explore and wonder.

INCENTIVES TO FUTURE EFFORT—ACCIDENTAL DISCOVERIES OF GREAT FACTS.

It may perhaps appear paradoxical to urge the student of nature to perseverance by reminding him that many of the most brilliant discoveries have in every age been the result of accident, yet such is the case, and even here we can see the disposing hand of Providence allowing man to achieve miracles in the acquisition of knowledge, yet under such circumstances as must humble him. The discovery of the power of the telescope to pierce the firmament was like that of the glass of which it was composed, altogether casual. Galvani introduced us to the science of electricity by an accidental application of zinc and silver to the muscles of a frog. We owe the wonders of the magnetic telegraph to the unexpected discovery of Orested that a galvanic current deflected a magnetic needle. Brinkley established the prodigious velocity of light while he was investigating a totally different phenomenon. Hargraves was indebted for his remarkable improvement in the spinning jenny, which so greatly influenced the commerce of England, to his child, who upset the wheel at which he worked; the wheel continued to work the spindle in a vertical position, he seized on the idea and multiplied immensely the power of the instrument. Had not Watt been employed as a workman to repair an atmospheric engine we might still have been ignorant of the power of the steam engine. Had not an apple fallen at the precise time it did at the feet of Newton we might still have been unacquainted with the law of gravitation. It was the simple observation that silver was blackened by the sun's rays which led to the discovery of the chemical power of light. Of these and many other discoveries the origin was in great measure accidental, not in the sense of a blind chance, but in their being introduced into the world under circumstances which loudly proclaim the hand of a disposing power, man appropriating to his use phenomena thrust (as it were) on his observation. The time again when these grand master-pieces of discovery were wrought prove the same conclusion. Who is there who does not see something more than a happy coincidence in the fact that the facilities of working the coal-mines of England were acquired at the precise